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PENNIE AND EDMONDS
1155 AVENUE OF THE AMERICAS
NEW YORK, NY 100362711

EXAMINER
IBRAHIM, MEDINA AHMED

ART UNIT	PAPER NUMBER
1638	

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12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/978,274	THOMAS ET AL.	
	Examiner	Art Unit	
	Medina A Ibrahim	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the corresp ndence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 May 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) *5,6,10-21,25 and 26* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7-9,22-24 and 27-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *7 and 8* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group VII in Paper No. 11 filed on 5/02/03 is acknowledged. The traversal is on the ground(s) that the subject matters in Groups I-III and VII are improperly restricted because SEQ ID Nos: 4, 6, and 8 in Groups 1, II, and III are fragments of SEQ ID NO: 2 in Group VII. Applicant argues that the invention of Group VII encompass Groups I-III, and therefore should be examined together. Applicant also argues that inventions of Group IV, V, and VI are related to the invention of Group I-III and VII because they rely on proteins having same function and effect, i.e., inducing necrotic effect in plants. Applicant asserts the search of Group VII will cover the search of the inventions of Groups I-VI. These arguments have been considered but not all are found persuasive.

Applicant's arguments regarding the relatedness of Groups I-III and VII are persuasive as the search of Group VII encompasses Groups I-III. Therefore, Groups I-III and VII are hereby rejoined. However, the arguments against the restriction between inventions of Groups IV-VI and the invention of Groups I-III, VIII are not persuasive because the inventions are independent and distinct for the reasons of record. The invention of Group IV or V is directed to a method that employs SEQ ID NOs: 30-31 or 32, respectively, which are not required by the invention of Groups I-III and VII. The invention of Group VI employs two chimeric genes, which are not required by the invention of Groups I-III and VII. Therefore, inventions IV, V, VI and invention I-III, VII are unconnected in operation and effect. In addition, while the inventions employ nucleic

acids encoding proteins of similar function, i.e., induce necrotic effect; the nucleotide sequences/proteins differ in structure as shown by different SEQ ID NO: and the proteins have different level of necrotic effect, absent evidence to the contrary. In addition, while the search of Groups I-III, VII may retrieve references that are related to Groups IV-VI, there is no reason to believe that their coexamination is not undue burden upon the Examiner. Note, the restriction requirement between inventions of Group I-III, VII and IV-VI are subject to the non-allowance of claims 1, 7-9 and 27-32. The requirement is still deemed proper and is therefore made FINAL.

Claims 1-32 are pending.

Claims 1-4, 7-9, 22-24 and 27-32 are under examination.

Claims 5-6, 10-21, and 25-26 are with drawn from consideration as being drawn to a non-elected invention.

Title

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The title should reflect that the claimed invention is drawn to a method of using nucleic acid sequences encoding pokeweed antiviral proteins.

Drawings

3. The drawings filed 10/15/2001 are approved by the Examiner.

Priority

4. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in United Kingdom on 14 October 2000. It is noted, however, that

applicant has not filed a certified copy of the foreign priority application as required by 35 U.S.C. 119(b). Therefore, Applicant has not complied with the conditions for receiving benefit of the foreign filing date.

Claim Objections

5. Claim 7 does not further limit parent claims 2-4. Claims 2-4 recite "homologous". Homologous sequences are defined in the specification, on page 12, as sequences that are at least 70%, 80%, 90% or 95%; therefore, the "60% homologous" of claim 7 does not further limit "homologous" of parent claims 2-4.

6. Claims 27-32 are objected to under 37 CFR 1.75(c) as being in improper form because each claim depends upon another multiple dependent claim. See MPEP § 608.01(n). In the interest of compact prosecution, the claims are considered to depend on "any one of claims 1-4".

7. Claims 7-9 are objected to because of the following informalities: the claims recite incomplete sequence identifier. Appropriate correction is required.

Claims 2-4, 7-9, 23-24, and 27-28, "A" should be changed to ---The---, for proper dependency.

Claims Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-4, 7-9, 22-24 and 27-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-4 and 22 are indefinite for lacking correlation between the preamble and the method steps. The method steps are unclear and not in order. Appropriate correction is required to more clearly define the metes and bounds of the claims. Also, it is unclear whether it is the chimaeric gene or a coding sequence comprised by the chimaeric gene that encodes the pokeweed protein. Also, is the "said gene" in line 4, before " comprising" refers to the chimaeric gene or the gene coding for the protein. If Applicant intends ----a chimaeric gene comprising a coding sequence encoding a mature pokeweed ....., and a promoter.... ----, the claims should be recited as such. Dependent claims 7-9, 23-24 and 27-32 are included in the rejection.

In claims 1, 22 and 28, what is encompassed in a "promoter which acts in response to the application of a specific stimulus to said plant" is unknown. The specification fails to clarify the phrase, and therefore, the metes and bounds are unclear. The phrase is open to a variety of interpretations.

Claims 7-9 and 27-32 are indefinite for depending upon non-elected claims. Appropriate correction is required.

Claims 22 and 28 are indefinite in the recitation of "said promoter being appropriately selected to provide either nematode infection disruption, sterility, changes...or trichome development" because promoters do not provide phenotypes. Promoters control expression of genes encoding proteins that provide phenotypes. Appropriate correction to more clearly define the metes and bounds of the claims are required.

Claim 31 is confusing in the recitations of "DNA isolate of a chimeric gene" and "in combination with the method of ....." . The phrases are not clearly defined in the specification, and hence what is encompassed by the claim is unknown. Is the "DNA isolate of a chimeric gene" in addition to the gene and the chimaeric gene recited in parent claim 1?

In claim 32, is the chimaeric gene in addition to the chimaeric gene recited in parent claim 1? Also, what is intended by "in combination with the method of...." is unclear.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 1-4, 7-9 and 27-32 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method of inducing viral and nematode resistance in specific cells of a plant by expressing pokeweed antiviral protein (PAP) encoding sequences of SEQ ID NO: 1, 3, 5, or 7 in said cells and transformed plant and plant cells produced by said method, does not reasonably provide enablement for a method that employs any part of a mature PAP or a coding sequence that is homologous and having the same functionality of the disclosed sequences to induce resistance. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

The claims are broadly drawn to a method of inducing necrotic effect in specific cells of a plant, wherein the plant is transformed with a chimaeric gene comprising a sequence coding for a mature PAP or a part thereof, a homologous sequence having same functionality as the disclosed sequences, or sequences having at least 60%, 70%, and 80% homologous thereto, and a promoter responsive to specific stimulus including pathogen attack, chemical inducement or plant developmental stage. The claims are also drawn to plants and plant cells transformed by the said method, a DNA isolate, and a biologically functional expression vehicle containing said chimaeric gene.

Applicant teaches cloning and sequencing of a genomic DNA encoding pokeweed antiviral protein (proPAP-S) from pokeweed seed (SEQ ID NO: 1 encoding SEQ ID NO: 2). Applicant also teaches the mature PAP-S (SEQ ID NO:3 encoding SEQ ID NO:4), and PAP-Sα orβ (SEQ ID NO:5 or 7 encoding SEQ ID NO:6 or 8, respectively) domains. Applicant further teaches PAP-S constructs comprising CaMV 35S or the nematode-inducible promoter of KNT1 and either pro-PAP-S, PAP-S, PAP-Sα orβ, or PAP-S with N-terminal or C-terminal deletion (Figures 2-4; pages 37-40), and transformation of tobacco cells with said PAP-S constructs, along with GUS constructs. In one experiment, Applicant teaches that the expression of PAP-S α or PAP-Sβ alone in tobacco protoplasts resulted in a reduced GUS activity similar to that achieved by expression of PAP-S α and PAP-Sβ simultaneously. The results imply that expression of either PAP-S α protein or PAP-Sβ protein alone does have the ability to inhibit protein synthesis (Figures 6-7). Applicant further teaches transgenic potato plants expressing Pro-PAP-S having resistance against potato cyst nematodes (Figs. 12-13).

Applicant has not taught that any part of a mature PAP encoding sequence and all sequences that are at least 60%, 70%, and 80% homologous to the disclosed sequences are capable of inducing necrotic effect in specific cells of a plant. Applicant has not provided guidance with respect to modifications to any of the disclosed sequences, other than N-terminal and C-terminal deletions of the Pro- PAP-S, that resulted in homologous sequences that are capable of ribosome inactivating activity, and hence induce viral resistance in transgenic plant/plant cells. Applicant has not provided guidance for other parts of the mature PAP (other than the PAP-S α and PAP-Sβ domains) that are capable of the desired PAP activity.

The state of the prior art as exemplified by Lodge et al (PNAS, vol. 90, pp.7089-7093, 1993, Applicant's IDS) teach that the expression of PAP in transgenic plants may result undesired phenotype such as stunted, molted and sterility in the plant. Lodge et al teaches that tobacco plants expressing high levels (above 10ng/mg of protein) of wild type and mutant PAP tend to have stunted and mottled phenotype, and some the plants were sterile (see page 7090, Results and Discussion). On the other hand, Barbieri et al (Biochemica et Biophysica Acta, vol. 1154, pp. 237-282, 1993, Applicant's IDS) teaches that plant RIPs including PAP can act on their ribosomes only at high levels of concentrations (see pages 251-252, section III-A). Another example is Tumer et al (PNAS, vol. 94, pp. 3866-3871, 1997, Applicant's IDS) who teach transgenic tobacco plants expressing high levels of PAP with point mutations showed growth reduction and lesions on their leaves (Fig. 3 on page 3868), while transgenic plants expressing high levels of active site mutant PAP didn't show antiviral activity, and while

transgenic plants expressing low levels of C-terminal deletion mutant were resistant to virus and showed normal growth (Table 2, page 3870).

In addition, the working examples disclosed in the specification are limited to the use of pro-PAP-S and mature PAP-S encoding sequences. The ability of pro-PAP-S or mature PAP-S (including PAP-S α and PAP-Sβ) to induce antiviral activity and/or nematode resistance in transgenic plants/cells cannot be extrapolated to sequences coding for "any part" of any mature PAP or homologous sequences of the disclosed sequences, absent further guidance.

Therefore, given the breadth of the claims, the state of the prior art, the nature of the invention, the limited working examples, and the unpredictability with respect to PAP phytotoxicity and antiviral activity in transgenic plants as discussed above, the claimed invention is not enabled throughout the broad scope. See In re Wands 858 F.2d 731, 8USPQ2nd 1400 (Fed. Cir, 1988).

See, also, *Amgen Inc. Chugai Pharmaceutical Co. Ltd.*, 18 USPQ 2d 1016 at 1027 (Fed. Cir. 1991) where the court held that the disclosure of a few gene sequences did not enable claims broadly drawn to any analog thereof.

Written Description

12. Claims 1-4, 7-9 and 27-32 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed

invention does not meet the current written description requirement for the following reasons.

The claims are broadly drawn to a method of inducing necrotic effect in specific cells of a plant, wherein the plant is transformed with a chimaeric gene comprising a sequence coding for a mature PAP or a part thereof, a homologous sequence having same functionality as the disclosed sequences, or sequences having at least 60%, 70%, and 80% homologous thereto, and a promoter responsive to specific stimulus including pathogen attack, chemical inducement or plant developmental stage. The claims are also drawn to plants and plant cells transformed by the said method, a DNA isolate, and a biologically functional expression vehicle containing said chimaeric gene. In contrast, Applicant describes a method of inducing viral and nematode resistance in transgenic plant and plants comprising transforming said plant and plants cells with nucleic acid sequences encoding pro-PAP-S, mature PAP-S including PAP-S α and PAP-Sβ) and plant and plant cells produced by said method. Since Applicant has not described a representative species of homologous sequences having 60%, 70% and 80% sequence homology to the disclosed and any part of mature PAP nucleic acid sequence encoding PAP having the desired activity, methods that use said nucleic acid sequences and plant and plant cells produced by said are similarly not described. Therefore, the specification fails to sufficiently describe the claimed invention in such full, clear, concise, and exact terms that one skilled in the art would recognize that Applicants are in possession of the invention as broadly claimed.

Accordingly, the claimed invention lacks adequate written description as required under the current written description guidelines (See Written Description Requirement published in Federal Registry/Vol.66, No. 4/Friday, January 5, 2001/Notices; P. 1099-1111).

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 1 and 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Baszczynski (US 5, 756, 324 (A)).

The claims are broadly drawn to a method of inducing a necrotic effect in specific cells of a plant, wherein the plant is transformed with a chimaeric gene comprising a sequence coding for a mature pokeweed antiviral protein or part thereof and a promoter which acts in response to the application of a specific stimulus to said plant, such that said mature pokeweed antiviral protein or part thereof is expressed in specific cells of said plant, and wherein said promoter is selected to provide male sterility.

Baszczynski et al teach a method of inducing viral resistance in a plant by expressing a structural gene encoding pokeweed antiviral protein under the control of the microspore-specific promoter of Bnm1. The reference teaches that the microspore-specific promoter of Bnm1 induces gene expression in the microspores of transgenic plants beginning at the uninucleate stage of development as well as in tapetal cells. (column 17, 1st full paragraph; and Example 5). Since PAP is expressed in the microspore cells of the plant, necrotic effect is inherently induced in said cells. Given the broad interpretation of the promoter of the claimed method, the cited reference teaches said promoter and the plant is also a male sterile. Therefore, Baszczynski teaches all claim limitations.

16. Claims 29-32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tumer (US 5, 880, 329).

The claims are drawn to a plant and plant cell transformed by a specified method, a DNA isolate and a biologically functional expression vehicle containing a chimaeric gene in connection with said method.

Tumer teaches a transgenic plants and plant cells produced by a method comprising transforming plant or plant cells with a chimeric gene comprising a DNA encoding a mature wild type PAP or PAP mutant (with specific point mutations or with truncated C-terminal), and an inducible, constitutive or tissue-specific promoter, wherein the expressed PAP induces viral resistance in the transformed plant (columns 15-22, and columns 25-28). The claimed plant, plant cells, DNA isolate and biologically functional expression vehicle are indistinguishable from the plant, plant cell, isolated

DNA encoding PAP, and the expression vector taught by Tumer. Accordingly the burden shifts to Applicant to provide evidence that the prior art would neither anticipate nor render obvious the claimed invention. See, *In re Best* 195 USPQ 430, 433 (CCPA 1977).

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

18. Claims 1-4, 7-9, 22, and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanieswski et al (6, 015, 940 (A)).

The claims are drawn a method of inducing necrotic effect in specific cells of a plant by transforming a plant with a chimaeric gene comprising a sequence coding for a mature pokeweed antiviral protein or a part thereof, and a promoter responsive to

pathogen attack or chemical inducement, and a plant and plant cell transformed by said method. The claims are also drawn to a DNA isolate and a biologically functional expression vehicle containing the chimaeric gene.

Kanieswski et al teach a method of inducing viral resistance in tobacco and potato plants and plant cells, the method comprising transforming said plants/plant cells with a chimeric gene comprising a DNA sequence encoding PAP' or a mutant thereof retaining PAP activity, a tissue-specific or inducible promoter, N-terminal signal sequence capable of targeting said PAP' in specific cells of the plant. The reference further teaches transgenic potato plants that are resistant to PVX, PVY and PLRV (potato virus X, Y, and potato leafroll viruses) (column 2; column 9, lines 24-41; Examples 2-3; and columns 27-28). In column 3, lines 2-10 and column 4, lines 3-30, Kanieswski suggests that other forms of PAP including PAP-S and PAP-II can be isolated from pokeweed seed and summer leaf, respectively, and used in the disclosed method. In column 9, lines 25-45, the cited reference suggests expressing the pokeweed antiviral protein in a tissue-specific manner in cells where viral infection is known to occur.

Kanieswski et al does not expressly teach inducing necrotic effect in specific cells of the plant. However, given the tissue specific expression of PAP as taught by Kanieswski et al, and the cytotoxic effect of pokeweed antiviral proteins as known to one of skill in the art, necrotic effect in specific cells of the plant is expected. In addition, a sequence search result indicates at least 66%/80% sequence identity/similarity between Applicant's SEQ ID NO: 1 (Pro-PAP-S) and the DNA sequence of the prior art.

Note, "homology" (either based on the full length or a portion) is defined in here as based on a fragment of SEQ ID NO: 1 (which includes SEQ ID NO: 3, 5, and 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of transforming a plant with a pokeweed antiviral protein encoding DNA to induce viral resistance as taught by Kanieswski et al, and to modify that method by incorporating any other PAP encoding DNA sequence with any other suitable regulatory element to induce viral resistance in a plant or in specific cells of the plant, as suggested by Kanieswski et al. One would have a reasonable expectation of success as taught by Kanieswski et al . One would have been motivated to do so, given the antiviral and other disease resistance activity by PAP protein in transgenic plants as taught by Kanieswski. Therefore, the claimed invention as whole was clearly a *prima facie* obvious. Note, given the indefiniteness of a "promoter being appropriate to provide either nematode infection disruption, sterility, changes in flower morphology, abscission, seed release or trichome development", said promoter is taught in the cited reference.

Remarks

19. Claims 23 and 24 are deemed free of the prior art because the prior art does not teach or reasonably suggest a method of using pro-PAP-S or SEQ ID NO:1 to induce necrotic effect in specific cells of a transgenic plant.

20. Claims 23 and 24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

21. No claim is allowed.

22. Papers related to this application may be submitted to Technology Sector 1 by facsimile transmission. Papers should be faxed to Crystal Mall 1, Art Unit 1638, using fax number (703) 308-4242. All Technology Sector 1 fax machines are available to receive transmission 24 hrs/day, 7 days/wk. Please note that the faxing of such papers must conform with the Notice published in the Official Gazette, 1096 OG 30 (November 15, 1989).

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Medina A. Ibrahim whose telephone number is (703) 306-5822. The Examiner can normally be reached Monday-Thursday from 8:30AM to 5:30PM and every other Friday from 9:00AM to 5:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Dr. Amy Nelson, can be reached at (703) 306-3218.

Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 308-0196.

7/25/03

Mai

Medina A. Ibrahim